PATENT

REMARKS

Claims 1-7 and 15 are pending. Claims 8-14 are canceled by this response, and claim 15 has been amended. Claims 1-7 are allowed and remain unchanged by this response. Attached hereto is a VERSION SHOWING CHANGES MADE indicating amendment to the claims and also reproducing non-amended claims for the Examiner's reference.

As a threshold matter, the Examiner is alerted to the fact that a supplemental information disclosure statement (IDS) submitting seven additional references was mailed on March 25, 2003. Accordingly, the Examiner is respectfully requested to return with the next Office communication, an initialed form indicating consideration of these additional references.

In the office action mailed October 4, 2002, the Examiner allowed that claims 1-7 were allowed, and that claim 15 would be allowable if amended to recite the elements of independent claim 8. In the interest of expecting issuance of claims indicated as being allowable, the claims have now been amended in the manner suggested by the Examiner. Specifically, claim 15 has been amended to be in independent form, incorporating the elements of claim 8. Claims 8-14 have been canceled without prejudice to filing continuation application(s) drawn thereto.

Based upon the above amendments and remarks, it is respectfully asserted that pending claims 1-7 are allowed, and claim 15 is now in condition for allowance. Reexamination of the pending claims and prompt issuance of a notice of allowance to that effect is therefore respectfully requested. If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

Claims 8-14 are canceled by this response without prejudice to filing of continuation application(s) drawn thereto.

Claims 1-7 are unchanged by this response.

Claim 15 is amended in the manner shown below.

1. (Allowed) A substrate processing chamber having at least one component bearing a rare earth-containing coating bound to a parent material by an intervening adhesion layer, such that the component exhibits resistance to etching in a plasma environment.

2. (Allowed) The substrate processing chamber of claim 1 wherein said rare earth-containing coating is selected from the group of Yttrium fluoride, Yttrium oxides, Yttrium-containing oxides of Aluminum, Erbium oxides, and Neodymium oxides.

3. (Allowed) The substrate processing chamber of claim 1 wherein the component is selected from the group comprising a chamber liner, a chamber dome, a chamber wall, a cover plate, a gas manifold, a faceplate, a substrate support, and a substrate support/heater.

4. (Allowed) The substrate processing chamber of claim 1 wherein the adhesion layer comprises a graded subsurface layer of rare earth material formed in the surface of the parent material.

5. (Allowed) The substrate processing chamber of claim 4 wherein the adhesion layer comprises a subsurface rare earth layer resulting from a changed energy of bombardment during introduction of rare earth material into the parent material through an IBAD process.

6. (Allowed) The substrate processing chamber of claim 4 wherein the adhesion layer comprises a subsurface rare earth layer resulting from a changed implantation energy during introduction of rare earth material into the parent material through a MEPIIID process.

7. (Allowed) The substrate processing chamber of claim 1 wherein the parent material comprises aluminum nitride or aluminum oxide.

15. (Amended) [The method of claim 8] A method for treating a parent material for corrosion resistance to plasma comprising:

forming an adhesion layer over a parent material; and

forming a rare earth-containing coating over the adhesion layer [wherein the rare-earth containing coating is formed] by exposing a rare earth present on a surface of the parent material to a fluorine ambient.